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September 22, 2005

Mary L. Cottrell, Secretary
Department of Telecommunications and Energy
One South Station, 2nd Floor
Boston, MA 02110

RE: D.T.E. 04-116- Investigation by the Department of Telecommunications and Energy On Its Own Motion Regarding the Service Quality Guidelines Established in Service Quality Standards for Electric Distribution Companies and Local Gas Distribution Companies, D.T.E. 99-84 (2001)

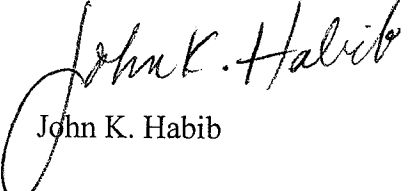
Dear Secretary Cottrell:

Please find attached the responses of Boston Edison Company, Cambridge Electric Light Company, Commonwealth Electric Company, d/b/a NSTAR Electric and NSTAR Gas Company (together with NSTAR Electric, "NSTAR") to the following record requests asked by the Department of Telecommunications and Energy to NSTAR at its September 8 and 9 Technical Sessions in the above-referenced proceeding:

- RR-DTE-3
- RR-DTE-4
- RR-DTE-5
- RR-DTE-6
- RR-DTE-7
- RR-DTE-8
- RR-DTE-9
- RR-DTE-10
- RR-DTE-12

Please contact me, Cheryl Kimball or Kerry Britland at NSTAR if you have any questions regarding the filing.

Very truly yours,


John K. Habib

Letter to M. Cottrell
September 22, 2005
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Enclosures

cc: Service List
Jody Stiefel
Joseph Rogers, Assistant Attorney General

Record Request DTE-3 (Tr. 2, at 251)

Please compare penalties and offsets relating to SAIDI and SAIFI calculated to date pursuant to the Department's current Service Quality Guidelines with the penalties and offsets that would have been calculated if the IEEE Major Event Day standard had been required to be used for calculating excludable events during the same time period.

Response

NSTAR does not have sufficient data available to calculate penalties and offsets relating to the SAIDI and SAIFI metrics using the IEEE Major Event Day standard. The IEEE standard is calculated based on a set of data components that differs from the data set used to calculate the SAIDI/SAIFI metrics under the Department's current SQ Guidelines. NSTAR currently has only 2.5 years of historical data available (beginning in 2003) encompassing the full data set required to perform the IEEE calculation. Prior to 2003, for instance, the Company did not compile data on outages affecting a single customer or single transformer, each of which is a component of the IEEE calculation. Less than three years of historical data is not sufficient to perform a statistically valid calculation of penalties and offsets for the SAIDI/SAIFI metrics using the IEEE Major Event Standard.

Record Request DTE-4 (Tr. 2, at 252)

Would NSTAR Electric's historical SAIDI and SAIFI data be affected if the momentary outage standard was changed to allow exclusions of momentary outages of less than 5 minutes rather than the current momentary outage standard of less than one minute?

Response

Please see the attached Excel file (Attachment RR-DTE-4). The attachment calculates the Company's 2004 SAIDI and SAIFI performance statistics assuming that the momentary outage standard allowed exclusions of momentary outages of less than 5 minutes rather than the current momentary outage standard of less than one minute. As shown on the attached schedule, excluding outages of less than 5 minutes has only a very slight impact on the SAIDI/SAIFI performance benchmark.

From NSTAR's perspective, it makes sense to change the definition to exclude outages between one and five minutes because the majority of the Company's control and protection equipment is designed to operate within a very short time period of the initial outage to restore power automatically. By changing the definition of "momentary outage," the SQI measurement process will appropriately exclude those outages where the system equipment has functioned quickly and properly, consistent with the system design. This will help to encourage electric companies to invest in equipment that restores power quickly and without human intervention.

Effect in change in momentary exclusion definition from 1 to 5 minutes**Current DTE SQI guidelines**

2004	Customers Interrupted	COH	SAIDI	SAIFI
Boston Edison	703,933	759,727	65.38	1.010
COM/Electric	274,212	310,820	51.57	0.758
Cambridge Electric	29,575	39,114	49.29	0.621

Current DTE SQI guidelines adjusted using 5 minutes for momentary exclusion

2004	Customers Interrupted	COH	SAIDI	SAIFI
Boston Edison	624,164	755,798	65.04	0.895
COM/Electric	265,739	307,761	51.06	0.735
Cambridge Electric	28,179	38,751	48.83	0.592

Difference from 1 minute momentary to 5 minute momentary

2004	Customers Interrupted	COH	SAIDI	SAIFI
Boston Edison	79,769	3,929	0.34	0.11
COM/Electric	8,473	3,059	0.51	0.02
Cambridge Electric	1,396	363	0.46	0.03

Record Request DTE-5 (Tr. 2, at 276)

Please compare the impact of the current (Major Event) exclusion of 15% of NSTAR Electric's customers, to the IEEE statistic, based on customer outage hours or minutes.

Response

Please see the attached spreadsheet (Attachment DTE-5) providing an illustrative example of the customer outage hours ("COH") that would be excluded under the Major Event Day definition encompassed in the Department's current SQ Guidelines (interruption of 15% of customers in the service territory) as compared to the hours excluded under the IEEE Major Event Day standard for the NSTAR Electric service territory. The data demonstrates that, on a company-wide basis, excludable customer outage hours would have been greater over the previous three years for the overall NSTAR Electric service territory had the IEEE 1366-2003 "Major Event Day" standard been used to calculate SAIDI and SAIFI.

As noted in response to Information Request DTE-NSTAR-1-2 and other responses to the Department's information requests in this proceeding, the Company's concern with the IEEE 1366-2003 standard is two-fold: (1) it excludes "major events" based on a threshold of what is "normal" for a particular service territory; and (2) it excludes events on the basis of a combination of the number of customers affected and duration rather than on the "magnitude" of the outage as defined only by the number of customers affected. Therefore, the mechanism explicitly works to set a unique threshold of exclusion for each system, which is directly affected by the level of investment and service-restoration efforts undertaken by management. Given these concerns, the Company believes that the IEEE 1366-2003 standard should not be adopted by the Department at this point in time and, instead, should be studied over time to ensure that there is a sufficient understanding as to the way in which it will affect the measurement of electric reliability on individual systems.

Comparison of COH excluded as a Major Event under DTE SQ Guidelines (15% of service territory) versus IEEE 1366-2003 Standard

NSTAR ELECTRIC SERVICE TERRITORY

	DTE SQ Guidelines	IEEE 1366- 2003
2002	none	none
2003	426,520	426,520
2004	none	860,830

OUTAGES EXCLUDED (BY METHODOLOGY):

DTE SQ Methodology (15% of Service Territory)

2003	Commonwealth Electric December 1, Transmission event
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IEEE 1366-2003 Methodology

2003	Commonwealth Electric December 1, Transmission event
2004	Commonwealth Electric December 26-27, Snowstorm

NSTAR Electric & Gas
Department of Telecommunications and Energy
D.T.E. 04-116
Record Request: **DTE-6**
September 22, 2005
Person Responsible: Stephen Sullivan
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Record Request DTE-6 (Tr. 2, at 343)

Please provide a copy of the company's inspection and maintenance guidelines.

Response

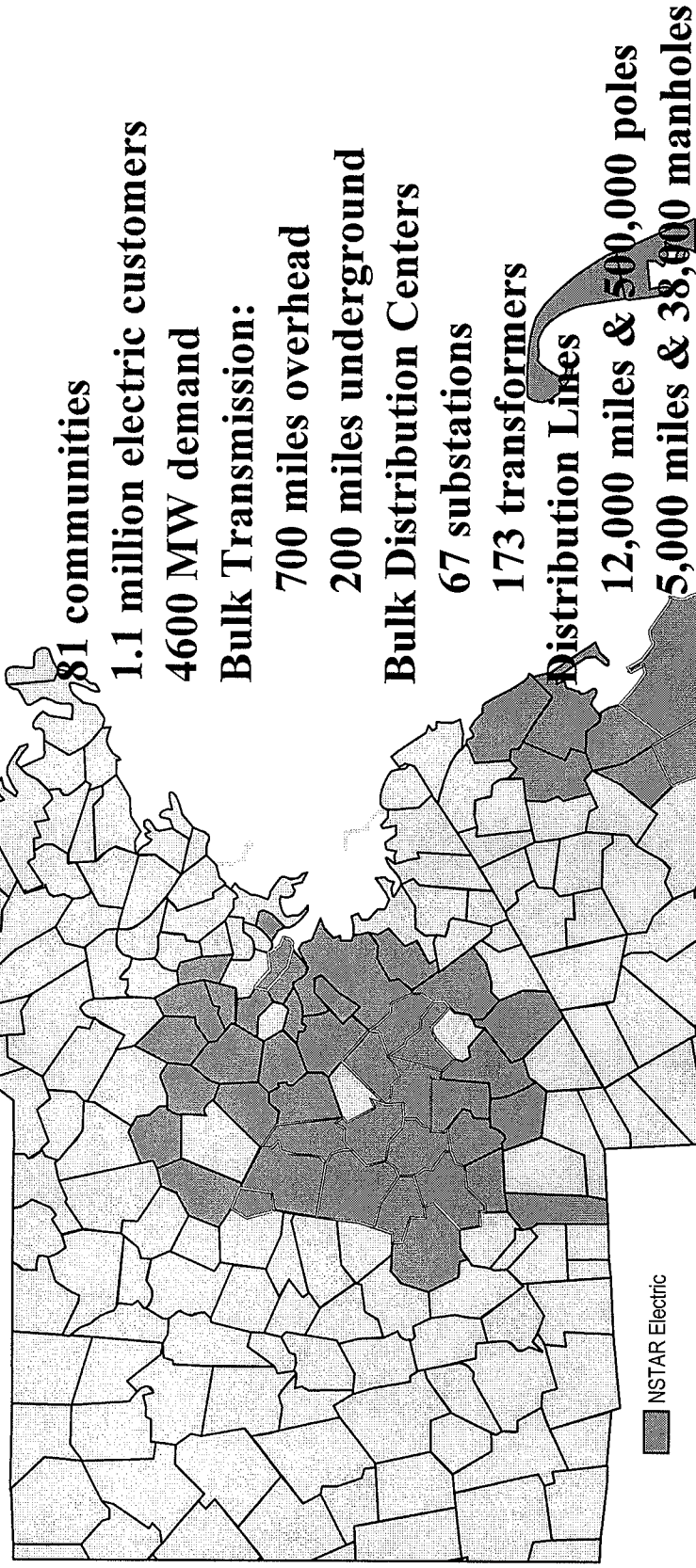
Please find attached: (1) a general overview of NSTAR Electric's Inspection and Maintenance Programs relating to its Overhead, Underground, Network and Substations (see Attachment RR-DTE-6(a)); (2) a detailed description of NSTAR Electric's inspection and maintenance practices relating to NSTAR Electric's underground electric distribution facilities (see Attachment RR-DTE-6(b) (January 21, 2005 Letter to Ronald LeComte)); and (3) various Work Standards associated with NSTAR Electric's Inspection and Maintenance protocols (see Attachment RR-DTE-6(c)).



NSTAR Inspection & Maintenance Programs

September 9, 2005

ELECTRIC DELIVERY “INFRASTRUCTURE”



Overhead Distribution Inspection & Maintenance Programs

- Circuit Walkdown and Upgrade Program- target poor performing overhead circuits – approx. 40 per year
- Tree trimming & hazard tree removals – 3-5 year desired trim cycle
- Infrared – mainline of all overhead ckts annually
- Pole Inspections & Restorations/Replacements – approx. 10 yr insp cycle
- Equipment Inspections – annually for reclosers, sectionalizers, cap banks, voltage regulators, approx. 4 yrs for switches



Underground Distribution Inspection & Maintenance Programs

- Manhole Inspections and Repairs/Upgrades – approx. 600 formal inspections and upgrades annually – focused on congested mhs, critical locations, poor performing lines, etc.
- Informal mh inspections - The Company's field employees typically enter approximately 10,000 manholes in any given year for reasons relating to all aspects of the Company's operations including, maintenance, construction, troubleshooting, switching and inspections
- Pilot program for diagnostic testing for underground cables – Cable Wise technology (partial discharge testing) DSS lines and network feeders
- Infrared – pilot program for underground equipment
- Padmount Equipment – inspection cycles vary from 1 to 5 yrs, includes infrared survey of equipment

Network Inspection & Maintenance Programs

- Infrared building vaults, power transformers and circuit breakers—annually
- Overhaul protectors – 4 yr cycle
- Network Power transformers – oil (4 yrs) and operational testing
- Inspection and upgrade manholes
- Network load monitoring equipment (Hazeltine) – provides real time load information and network protector status (open/closed)



Substation Inspection & Maintenance Programs

- Substations – monthly visual inspections & annual infrared surveys
- Circuit breakers
 - oil or SF6 gas tests - annual
 - power factor, megger, ductor, etc. tests – vary 1-10 yr cycles
 - infrared – annual
 - operational inspections - monthly
 - overhauls – 2-6 yrs
- Power Transformers
 - oil & power factor testing vary 1-4 yrs
 - infrared surveys - annually
 - operational inspections – monthly
 - load tap changer preventative maintenance – 4-6 yrs
 - oil condition emote monitoring systems – 60% of bulk transformers
- Relays
 - calibration testing every 2-4 yrs



Overhead Transmission Inspection & Maintenance Programs

- Aerial Helicopter Patrols
 - Vegetation, infrared & visual done annually
- Ground level pole inspection & treatment
 - Done on an 8 year cycle
- Tree trimming / Mowing – 4 year cycle
- Foot Patrol Inspections: Done 50% each year
- High Definition Photographic Inspections
 - 150 miles each year
- Steel Structure Foundation Inspections & repair
 - Done on an 10 year cycle

Underground Transmission Inspection & Maintenance Programs

- Electrolysis Surveys & Analysis – Ongoing
- Oil Chemistry and Dissolved Gas Analysis-Annual
- Testing of Pipe Insulation Coating –Ongoing
- Manhole Inspections – Annual
- Bridge & Railroad Crossing – Annual
- Terminal Equipment & Oil Bleeding- Ongoing
- Pump Plant & Heat Exchanger inspections- Monthly
- Alarm System Calibrations – Annual